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Extra carapacial bones in the chicken turtle,

Deirochelys reticularia

CRAWFORD G. JACKSON, JR., AND MARY W. TROTTER*

The presence of supernumerary osseous carapacial elements in the chicken turtle, *Deirochelys reticularia*, has previously been undocumented. We herein report the condition in 3 adults (illustrating it in the most unusual specimen) and summarize previously published accounts of extra bony elements in the chelonian carapace.

The largest specimen (carapace length = 20.1 cm) possesses a distinct 3rd epipygal [suprapygial of some authors], and is in the collections of the United States National Museum (USNM 029584). An adult female (carapace length = 19.1 cm) in the San Diego Natural History Museum (SDNHM - 62298) possesses a 9th well-formed pair of pleuralia [costals of some authors]. In contrast to these bilaterally symmetrical, normal appearing individuals is a third specimen in the collections of the Florida State Museum (FSM - 30348). This asymmetrical adult female (carapace length = 19.1 cm) was collected near Wewahitchka in Gulf County, Florida, during 1957. It possesses 8 supernumerary neuralia which vary in size and somewhat in shape, and are conjoined with other carapace elements via interdigitating sutures (see Fig. 1.). Six of these neuralia lie to the left and 2 to the right of the midsagittal plane. The supernumerary elements are isolated from one another except for 3 of the left group which are serially joined anteroposteriorly. Examination of the visceral aspect of the carapace reveals no abnormal spinal curvature. The black area between pleuralia I and II is not an element, but is a perforation caused by a lesion. Firm evidence for the etiology of this anomaly is lacking. However, we suspect genetic rather than developmental causes since both number and arrangement of carapace scutes is normal, the modal number of pleurals and epipygals is present, and midline neutrals I, III, V, and VIII are typically incised by the appropriate scute sulci.

*Department of Herpetology, San Diego Natural History Museum, San Diego, California 92112.

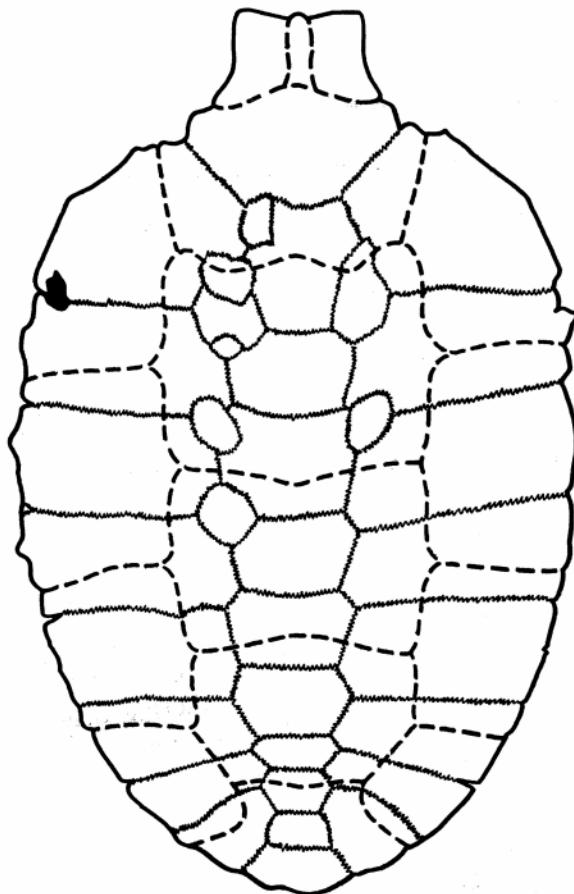
**Figure Legend**

Fig. 1. Dorsal view of carapace of *Deirochelys reticularia* showing 8 supernumerary neuralia. Dashed lines are scute sulci. Peripheral elements and pygal have been removed.

The presence of 5 shelled oviductal eggs and large body size attained demonstrate that the female was mature and probably normally functional.

Table 1 summarizes known occurrences of supernumerary carapace elements of dermal origin. The paucity of reports is probably due to difficulty in visualizing extra elements in intact specimens because the bony portion of the carapace is obscured.

TABLE 1

Summary of known cases of supernumerary osseous carapacial elements of turtles.

Taxa	Supernumerary element(s)	Authority
CHELONIIDAE		
<i>Eretmochelys imbricata</i>	4 neuralia (3 anterior, 1 posterior)	Deraniyagala, 1939
CHELYDRIDAE		
<i>Chelydra serpentina</i>	1 neural (posterior)	Stegeman, 1955
EMYDIDAE		
<i>Deirochelys reticularia</i>	epipygal	This report
<i>Deirochelys reticularia</i>	9th pair of pleuralia	This report
<i>Deirochelys reticularia</i>	8 neuralia (anterior to middle)	This report
<i>Emys orbicularis</i>	3 neuralia (middle to posterior)	Bojanus, 1819
<i>Emys orbicularis</i>	1 neural (posterior) left costal [=pleural] (posterior to pleural VIII)	Bojanus, 1819
<i>Emys orbicularis</i>	2 neuralia (posterior) right costal [=pleural] (posterior to pleural VIII)	Bojanus, 1819
<i>Emys orbicularis</i>	2 neuralia (posterior)	Bojanus, 1819
<i>Emys orbicularis</i>	1 neural (posterior)	Bojanus, 1819
<i>Graptemys flavimaculata</i>	left costal [=pleural] (between pleuralia IV and V)	Killebrew, 1977

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